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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,602	08/27/2001	Charles P. Kelly	MOT-D2191	5828

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EXAMINER

CHAI, LONGBIT

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/787,602

Applicant(s)

KELLY ET AL.

Examiner

Longbit Chai

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 9 have been presented for examination. Claim 1, 3 – 5, 7 and 8 have been amended; and new claims 10 – 12 have been added in an amendment filed 5/12/2005. Therefore, presently pending claims are 1 – 9.

Response to Arguments

2. Applicant's arguments filed on 5/12/2005 with respect to the subject matter of the instant claims have been fully considered but are not persuasive.

3. As per claim 1 – 9, Applicant argues: "Claims 7-9 are rejected under 35 USC 103(a) as being unpatentable over Zeidler Pursuant to 35 USC 103(c), any subject matter commonly owned at the time of invention is not to be considered when determining whether an invention sought to be patented is obvious under 35 USC 103. Applicants submit that both Zeidler and the present invention are assigned to General Instrument Corporation, and that the subject matter of the present invention was commonly owned at the time of invention. A copy of the Notice of Recordation for the present application and a copy of (IUSPTO Assignments on the Web" for Zeidler are attached hereto. Accordingly, the withdrawal of the 35 USC 103 rejection to claims 1 – 9 under Zeidler is respectfully requested". Examiner notes Applicant's arguments have been fully considered but are not persuasive. Examiner notes the patent of Zeidler (Patent Number: 5321748) issued on June 14, 1994 is qualified as "prior art" not only for

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35 USC 102(e) but also for 102(b) with respect to the application effective filing date of September 21, 1998 and therefore Applicant arguments can't overcome the rejection under 35 USC 103(c) (see MPEP 2146).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A person shall be entitled to a patent unless –

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zeidler (Patent Number: 5321748).

As per claim 7, Zeidler teaches a video line shuffling method utilizing a shuffler at a first location and a deshuffler having a memory at a second location, the method comprising the steps of: sending a first series of data shuffled according to a first permutation from the shuffler to the deshuffler (Zeidler: see for example, Column 8 Line 11 – 15: Zeidler teaches $PRN'[j] = PRN[i]$, such that $PRN[i] = j$ and thereby PRN' is the inverse permutation of PRN); and sequentially writing the first series of data into the memory such that data is written into a memory location after that memory location has been read (Applicant Admitted Prior-art: Page 7 Line 22), sending a second series of data according to an

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inverse of the first permutation from the shuffler to the deshuffler (Zeidler: see for example, Column 8 Line 11 – 15 and : Zeidler teaches $PRN' [j] = PRN [i]$, such that $PRN[i] = j$ and thereby PRN' is the inverse permutation of PRN); and

Zeidler does not teach explicitly writing to memory locations defined by the data in the inverse permutation such that data is written into a memory location immediately after dial memory location has been read.

However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Zeidler because it is well known techniques to utilize a pair of memories, one memory typically is written in a cycle while the other memory is typically read from in order to perform the deshuffling as evidenced in the background section of the application as the Applicant Admitted Prior-art (Applicant Admitted Prior-art: Page 7 Line 22).

As per claim 8, Zeidler teaches a method of writing data into a memory having C columns and R rows defining a plurality of memory locations, the method comprising the steps of: dividing the data into lines wherein each line contains a first length of data; dividing the lines into subsets each having a second length being smaller than the first length (Zeidler: see for example, Figure 3: The BLOCK-0, BLOCK-1, BLOCK-2 and BLOCK-3 are the subsets of the line); writing each subset into a selected row and column range of the memory such that each time a subset is written, the selected row is incremented by a value I (Zeidler: see for example, Figure 3: The RAM ROW 1 – 8 versus the COLUMN LINE 1 – 32).

As per claim 9, Zeidler as modified teaches the claimed invention as described above (see claim 8). Zeidler as modified further teaches I is selected so that each row has data written therein within a minimum selected time interval (Zeidler: see for example, Figure 5 Element 30 and Column 8 Line 61 – 66).

5. Claims 1 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zeidler (Patent Number: 5321748), in view of Robinson (Patent Number: 5555305).

As per claim 1, Zeidler teaches a method for shuffling a plurality of video lines; the plurality of video lines being grouped into a plurality of blocks, whereby the video lines are shuffled within each said block comprising the steps of:

applying a first shuffling function to a plurality of lines within a first block to generate a first plurality of permuted lines, the first shuffling function using a first block size B_1 and a first increment parameter I_1 (Zeidler: see for example, Figure 1 and Column 52 – 61);

Zeidler does not disclose expressly applying a second shuffling function to a plurality of lines within a second block to generate a second plurality of permuted lines, the second shuffling function using a second block size B_2 and a first increment parameter I_2 .

Robinson teaches applying a second shuffling function to a plurality of lines within a second block to generate a second plurality of permuted lines, the

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second shuffling function using a second block size B_2 and a first increment parameter I_2 (Zeidler: see for example, Figure 9b: The shuffling functions P1, P2 and P3 perform permutations on a separate set of plurality of lines).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Robinson within the system of Zeidler because Robinson teaches providing an encoding and decoding system based on a shuffling system which greatly enhance the security and is sufficiently robust for use with broadcasts (Robinson: see for example, Column 1 Line 54 – 57).

Therefore, Zeidler as modified further teaches applying a second shuffling function to a plurality of lines within a second block to generate a second plurality of permuted lines, the second shuffling function using a second block size B_2 and a second increment parameter I_2 .

As per claim 2, Zeidler as modified teaches the claimed invention as described above (see claim 1). Zeidler as modified further teaches line displacement in each shuffling function is limited to be within a block defined by the respective block size parameters (Zeidler: see for example, Figure 1 and Column 52 – 61).

As per claim 3, Zeidler as modified teaches the claimed invention as described above (see claim 2). Zeidler as modified further teaches line displacement within said first and second blocks is limited by the increment parameter (Zeidler: see for example, Figure 1 and Column 52 – 61).

As per claim 4, Zeidler as modified teaches the claimed invention as described above (see claim 1). Zeidler as modified further teaches the step of applying a third shuffling function to said second plurality of permuted lines, the third shuffling function having a third block size B_3 and a third increment parameter I_3 (Zeidler: see for example, Figure 9b: The shuffling functions P1, P2 and P3 perform permutations on a separate set of plurality of lines).

As per claim 5, claim 5 does not further teach does not further teach over claim 1 and 4. Therefore, see same rationale addressed above in rejecting claims 1 and 4.

As per claim 6, Zeidler as modified teaches the claimed invention as described above (see claims 1 – 5). Zeidler as modified further teaches the block size parameter of one of the shuffling functions defines a block having at least one boundary coincident with a boundary of a block of another shuffling function (Zeidler: see for example, Figure 9b: The shuffling functions P1, P2 and P3 perform permutations on a separate set of plurality of lines have one boundary coincidence).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Longbit Chai whose telephone number is 571-272-3788. The examiner can normally be reached on Monday-Friday 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


LBC

Longbit Chai
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Art Unit 2131


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